

# **INSTRUCTION MANUAL**



**FRR, VRR(36,48,72,84,96,108)  
FRS, VRS(48, 72, 84, 96, 108)**

**Refrigerated Bases  
Self-Contained and Remote**

## **OPERATING, INSTALLING AND SERVICE PERSONNEL**

Operating information for this equipment has been prepared for use by qualified and/or authorized servicers. All installation and service on this equipment is to be performed by qualified, certified, licensed and/or authorized installation or service personnel. Service may be obtained by contacting the factory Service Department, factory representative or local authorized servicer.

### **DEFINITIONS**

#### **QUALIFIED and/or AUTHORIZED OPERATING PERSONNEL**

Qualified or authorized operating personnel are those who have carefully read the information in this manual and are familiar with the equipment's function or have had previous experience with the operation of the equipment covered in this manual. This appliance is only for professional use and shall be used by qualified people.

#### **QUALIFIED INSTALLATION PERSONNEL**

Qualified installation personnel are individuals, a firm, corporation, or company which either in person, or through a representative are engaged in, and are responsible for:

1. The installation of gas piping from the outlet side of the gas meter, or the service regulator when the meter is not provided, and the connection and installation of the gas appliance. Qualified installation personnel must be experienced in such work, be familiar with all precautions required, and have complied with all requirements of state or local authorities having jurisdiction. Reference in the United States of America National Fuel Gas Code ANSI 223.1. In Canada-Canadian Standard CAN/CGA-B149.1 (Nat. Gas) or CAN/CGA-B149.2.
2. The installation of electrical wiring from the electric meter, main control box or service outlet to the electric appliance must be electrically grounded in accordance with local codes, or in the absence of local codes, with the National Electrical Code ANSI/N.F.P.A. No. 70. In Canada, follow the Canadian Electric Code, CSA-C22.2. Qualified installation personnel must be experienced in such work, be familiar with all precautions required and have complied with all requirements of state or local authorities having jurisdiction.

#### **QUALIFIED SERVICE PERSONNEL**

Qualified service personnel are those who are familiar with Wolf equipment and who have been endorsed by the Wolf Range Company. All authorized service personnel are required to be equipped with a complete set of service parts manuals and stock a minimum amount of parts of Wolf equipment.

**NOTICE:** Instructions must be posted in a prominent place within the kitchen area which will instruct the user of this equipment in the event of an emergency.

### **SHIPPING DAMAGE CLAIM PROCEDURE**

Upon receipt of your appliance, thoroughly inspect it for any damage during shipment. If damage is observed, contact the delivery carrier immediately and put in a freight claim.

For your protection, please note that equipment in this shipment was carefully inspected and packed by skilled personnel before leaving the factory. The transportation company assumes full responsibility for safe delivery upon acceptance of this equipment.

#### **If shipment arrives damaged:**

1. VISIBLE LOSS OR DAMAGE - Be certain this is noted on freight bill or express receipt and signed by person making delivery.
2. FILE CLAIM FOR DAMAGES IMMEDIATELY - Regardless of extent of damage.
3. CONCEALED LOSS OR DAMAGE - If damage is unnoticed until merchandise is unpacked, notify transportation company or carrier immediately, and file "Concealed Damage" claim with them. This should be done within (15) days of date delivery is made to you. Be sure to retain container for inspection. We cannot assume responsibility for damage or loss incurred in transit. We will, however, be glad to furnish you with necessary documents to support your claim.

**PLEASE RETAIN THIS MANUAL FOR FUTURE REFERENCE**

The Wolf refrigerated bases are provided by Kairak Inc. **KRES** is the Kairak model which is offered both in self contained and remote. The model numbers that are in this manual correlate to Wolf model numbers as follows:

Remote Models		Self Contained Models	
KAIRAK	WOLF	KAIRAK	WOLF
KRES-36R	FRR 36 and VRR36	KRES-48S	FRS48 and VRS48
KRES-48R	FRR 48 and VRR48	KRES-60S	FRS60 and VRS60
KRES-60R	FRR 60 and VRR60	KRES-72S	FRS72 and VRS72
KRES-72R	FRR 72 and VRR72	KRES-84S	FRS81 and VRS84
KRES-84R	FRR 84 and VRR84	KRES-96S	FRS96 and VRS96
KRES-96R	FRR 96 and VRR96	KRES-108S	FRS108 and VRS108
KRES-108R	FRR108 and VRR108		

## **GENERAL**

Kairak KRUC/KRWT/KRES model food storage units are available in many lengths from 27 to 120 inches long. These units are available as a refrigerated or freezer storage compartment. The condensing systems are designed to be installed with minimal clearance to walls or other equipment.

The KRUC/KRWT models are available as self-contained or remote installations. Standard features on these models include electronic temperature control, all stainless steel construction, 6 inch casters, and exterior dial thermometer. There are many options available including 2 drawer and 3 drawer modules, tray slides, 6 inch legs, 4 inch casters, door locks, and optional door hinging. Some options are not available on all models.

The KRES models are available as self-contained or remote installations. Standard features include 2 drawer modules, 4 inch casters, and stainless steel marine edge top. Optional features available include flat top, 6 inch casters, and 6 inch legs.

## **INSTALLATION**

Prior to installation, test the electrical service to assure that it agrees with the specifications of the equipment marked on the data plate. The data plate is located inside the storage cabinet. (See Fig. 1)

**KAIRAK Innovations**  
A Division of KAIRAK, INC.  
23955 President Ave, Harbor City, CA 90710

Serial No. →

MODEL NO.	
SERIAL NO.	
TYPE	

Electrical Specifications →

VOLTS		
HERTZ		
AMPS		
REFRIGERANT		
REFRIGERANT AMOUNT		
DESIGN PRESSURES	HIGH LOW	(P.S.I.G.) (P.S.I.G.)
MAX. FUSE SIZE		

**COMMERCIAL REFRIGERATOR AND/OR FREEZER**

**UL** LISTED 82WJ

**UL** SANITATION CLASIFIED TO NSF 7 - 1997

MEA #242-94-E VOL. II      PATENT #5355687  
(AND OTHER PATENTS PENDING)

UNION MADE BY SHEET METAL LOCAL 170

**Fig. 1**

## **UNPACKING**

Inspect equipment for shipping damage prior to installation. If shipping damage is found, save the packing materials and contact the carrier within 15 days of delivery.

Some components are packed and shipped inside the storage cabinet to avoid damage during shipment. Remove these items from the cabinet and remove packing materials. See "Installing Parts Shipped Loose" for installation instructions. Cut the plastic ties holding the shelves in place.

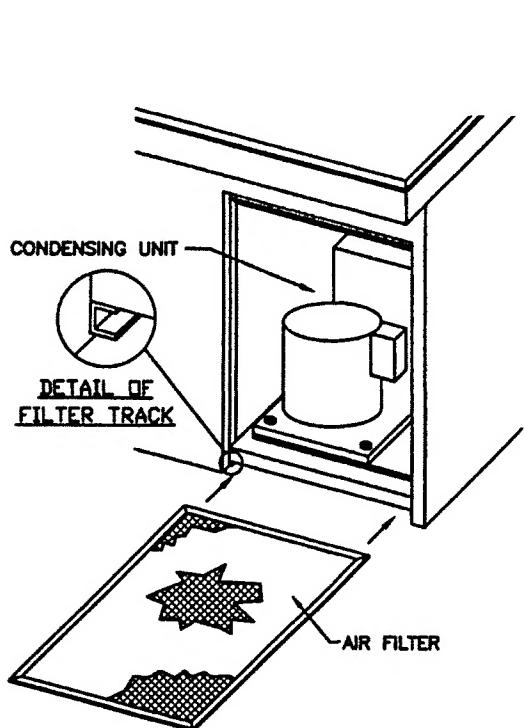
## **LOCATING THE EQUIPMENT**

Any model of lengths above 36" can be installed with no clearance at the back and sides of the units. Units 36" or shorter have a rear mount compressor and require a minimum clearance of 3 inches at the back and sides of the unit. This allows for sufficient air circulation of the condensing unit. Failure to provide adequate ventilation may cause severe compressor damage, and will void warranty.

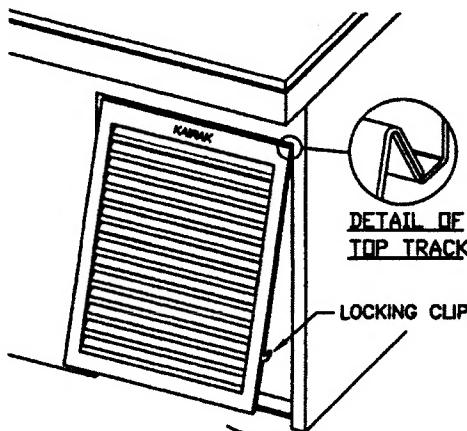
## **INSTALLING PARTS SHIPPED LOOSE**

### **Compressor Filter**

Remove louvered panel by lifting up and pulling out entire panel. Slide the filter into the tracks located below the compressor compartment. Be careful not to catch the filter on sharp edges when installing. Replace louvered panel by installing top of panel into track and pushing in the bottom so that the locking clips fit inside the opening. (See Fig. 2).



**Installing Filter**

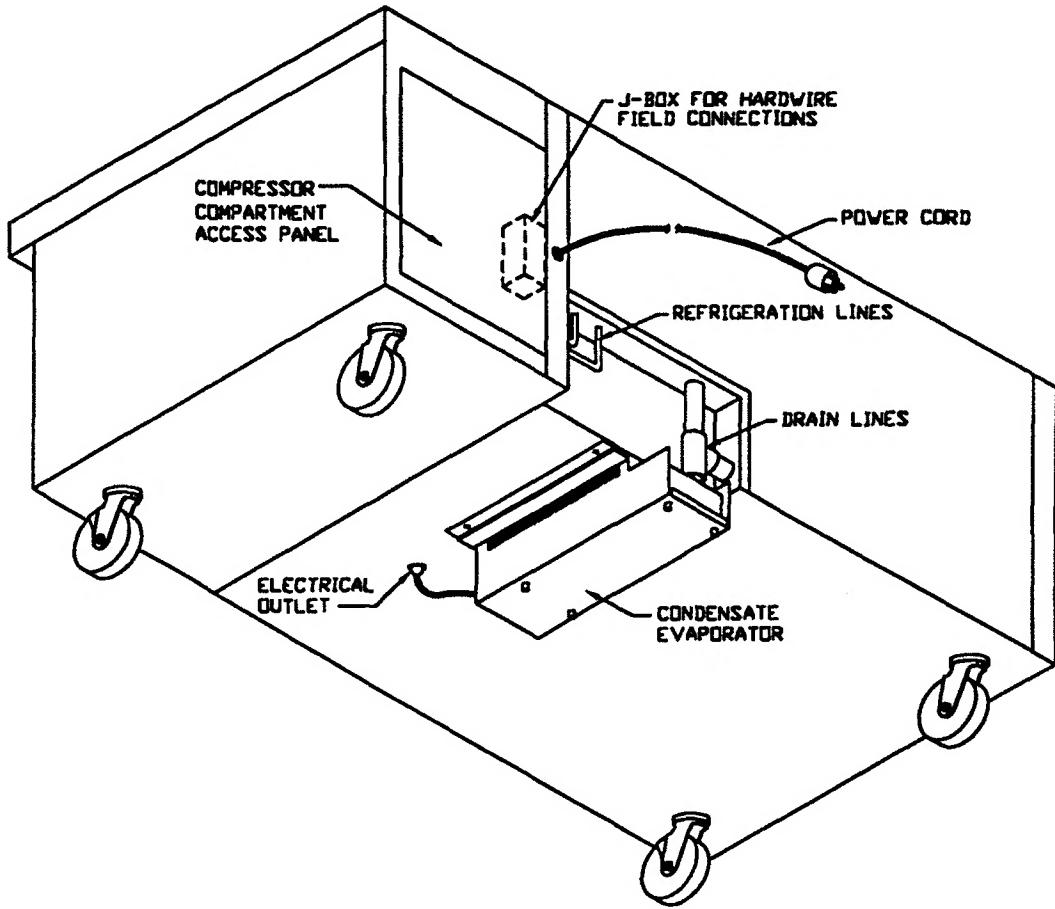


**Replacing louvered panel**

**Electric Condensate Evaporator**

**Fig. 2**

Some units may come with the electric condensate evaporator shipped loose. To install, attach the two (2) mounting rails to the bottom of the cabinet with 4 or 6 (depending on the model) #6-32 x 3/8 phillips head screws. Place the condensate evaporator in the heater bracket. Slide the heater bracket into the mounting rails. Plug the electrical cord into the heater and the electrical outlet. NOTE: Drain should be located above the condensate evaporator opening. (See Fig. 3).



**Installing Electric Condensate Evaporator  
(KRES Model shown)**

**Fig. 3**

## **REFRIGERATION LINES (Remote Units)**

**WARNING:** REFRIGERATION LINES ARE SHIPPED UNDER PRESSURE. USE CAUTION WHEN OPENING LINES.

On remote units, refrigeration lines for suction and supply are located on the back of the unit near the bottom. The suction line is tagged and marked "Suction". The suction line is 3/8" copper for units 27 inches to 55 inches in length, and 1/2" for units 56 inches to 120 inches in length. The supply line is 1/4" copper for units 27 inches to 55 inches in length, and 3/8" for units 56 inches to 120 inches in length. See "Electrical Connections" section for wiring instructions.

If no holding charge is evident upon opening lines, contact Kairak Warranty Department at 310-539-1443 immediately.

Cut refrigeration tubing with tube cutter (not a hacksaw) and deburr end of tube. Degrease tubing prior to field connection. Use Silfos 5% for refrigerant line brazing. 50/50 or cold solder is not acceptable.

For system charge, follow remote refrigeration system manufacturer's instructions.

## **ELECTRICAL CONNECTIONS**

Refer to the wiring diagram shipped with the unit located inside the compressor compartment or on the back of the unit.

### **Cord Connected Units (Self-Contained models)**

**WARNING:** THIS MACHINE IS PROVIDED WITH A THREE-PRONGED GROUNDING PLUG. THE OUTLET TO WHICH THIS PLUG IS CONNECTED MUST BE PROPERLY GROUNDED. IF THE RECEPTACLE IS NOT THE PROPER GROUNDING TYPE, CONTACT AN ELECTRICIAN.

Plug the unit into a properly sized outlet. See data plate located inside storage cabinet for circuit sizing.

### **Permanently Wired Units (Remote models)**

A junction box located on back of the machine near bottom is provided for electrical field connections. See wiring diagram shipped with unit on the back of the unit for electrical ratings.

## PRESTART CHECKS

### Defrost Time Clock Settings for Units with a Freezer Base

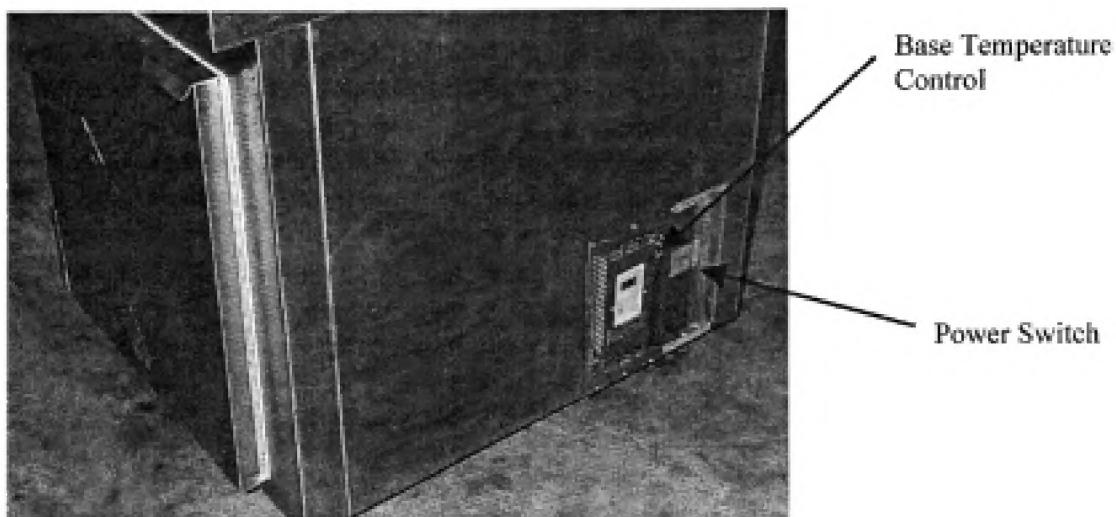
On units with a freezer base, the defrost time clock is set to defrost 3 times a day for a 15 minute time period. The factory defrost setting is off at 12:00 a.m., 8:00 a.m., and 2:00 p.m. for 15 minutes each. To change this setting, set the pins to desired off times. Each pin represents 15 minutes. Pins pulled out away from center of time clock represent refrigeration off. Pins pushed toward center indicate refrigeration on. Make sure time clock is set to correct time of day.

To set the time of day, rotate the disc in the direction of the arrows (clockwise rotation) to align the hands to the correct time of day.

### Temperature Control Settings

All temperature settings are preset at the factory but local conditions may necessitate slight adjustments.

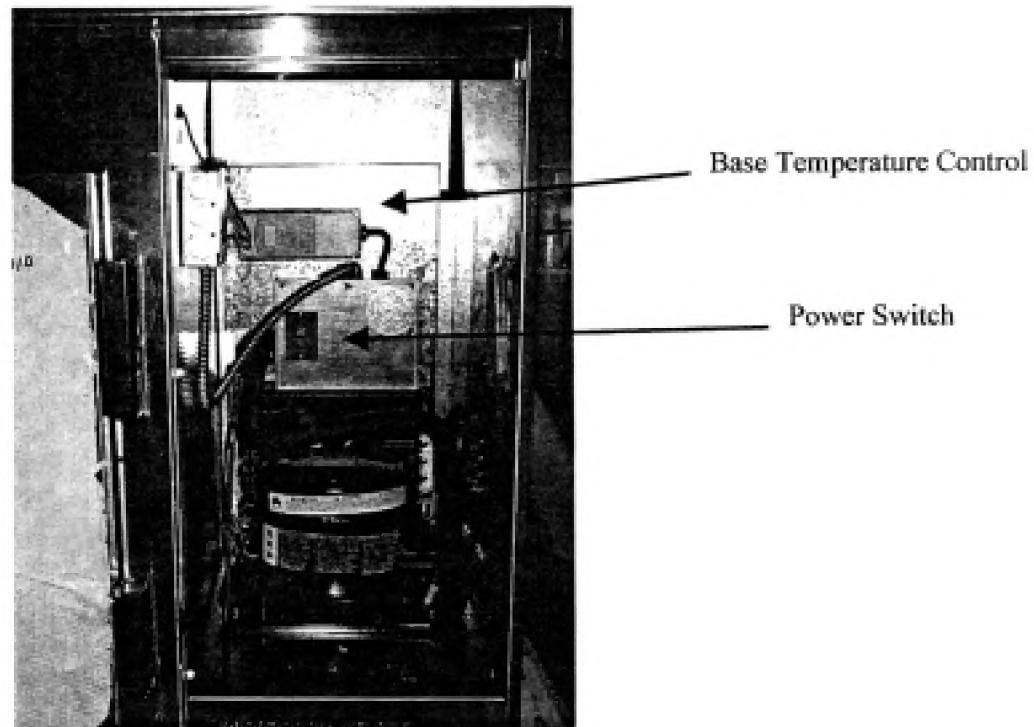
On self-contained models KRUC/KRWT-27S through KRUC/KRWT-36S, the temperature controls are located on the bottom sides of the unit toward the back of the machine. (See Fig. 4).



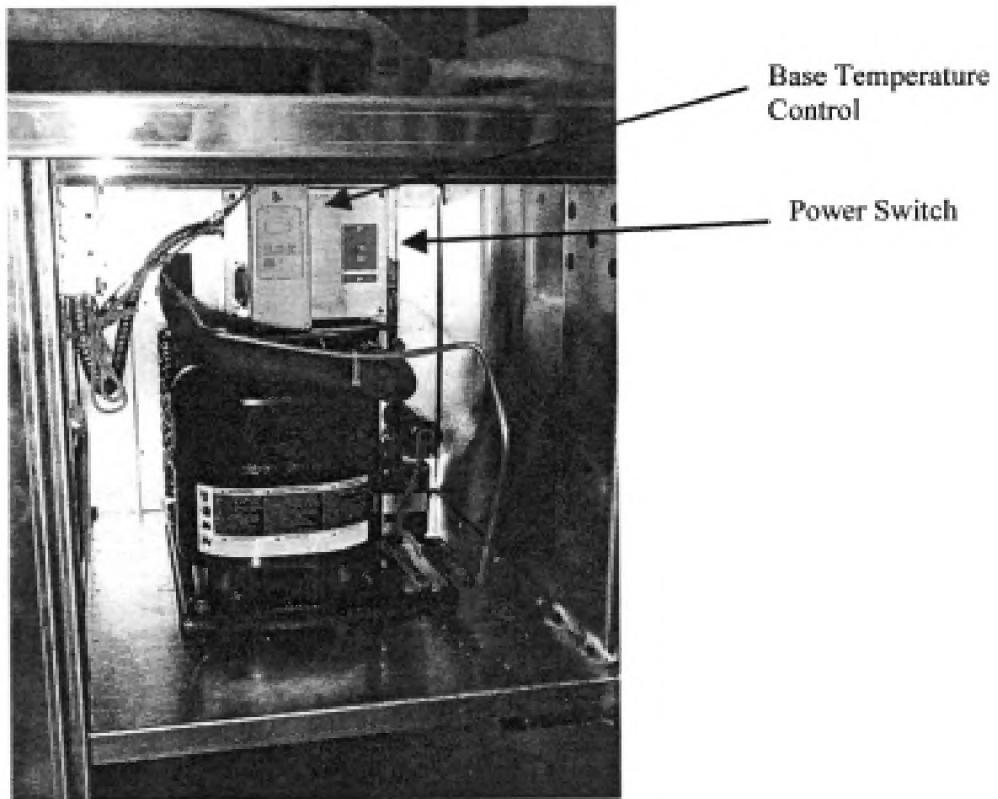
**KRUC/KRWT 27"-36" Self-contained  
Fig. 4**

On self-contained models KRUC/KRWT-37S through KRUC/KRWT-120S and all KRES lengths, the temperature control (shown in Figures 5 & 6) is located in the compressor compartment. Remove louvered panel by lifting up and pulling out entire

panel. Replace louvered panel by installing top of panel into track and pushing in the bottom so that the locking clips fit inside the opening.

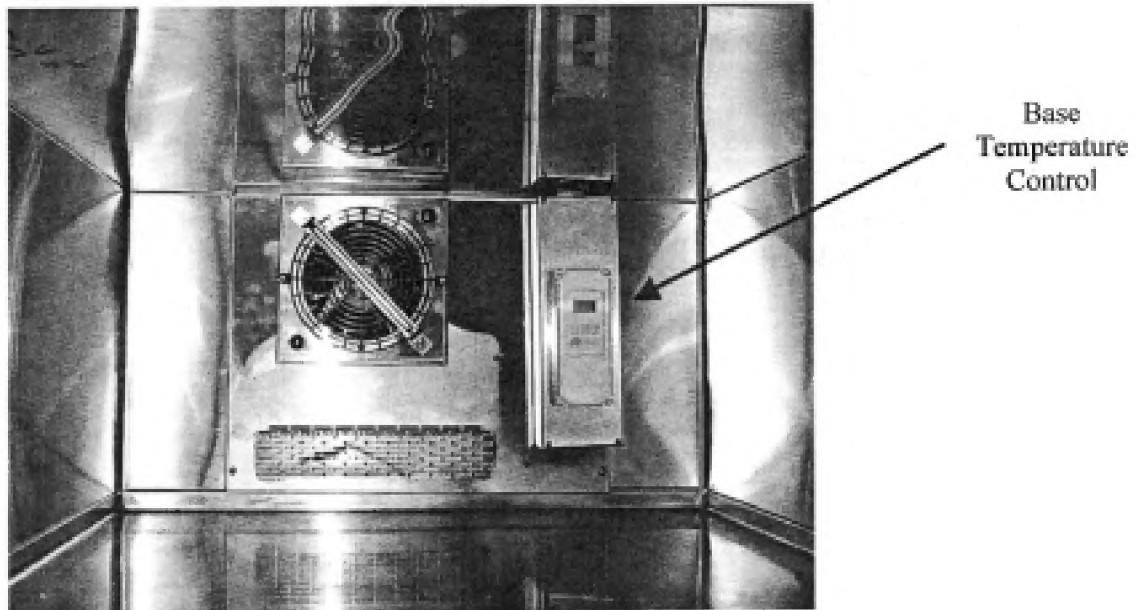


**KRUC/KRWT 37"-120" Self-contained  
Fig. 5**



**KRES Self-contained  
Fig. 6**

On all remote units and earlier self-contained models, the temperature control is located inside the lower storage cabinet. (See Fig. 7).



**KRUC/KRWT/KRES Remote**

### **Fig. 7**

On both self-contained and remote units, the temperature control should be set at 37°F with a 3°F differential. This display should read between 34°F and 40°F. The temperature control setting is "locked" to avoid unauthorized adjustments. Therefore, adjustments to the set point must be made by an authorized service technician.

If a freezer base, the temperature control should be set at 0°F with 2°F differential. Temperature display should read between -2°F and 2°F.

## **OPERATION**

A thermometer is provided on all refrigerator and freezer cabinets.

Allow cabinet to reach normal operating temperature before loading (approximately 1 hour).

The refrigerated storage cabinet is designed to maintain temperatures between 33°F and 40°F, or -10°F to 0°F for a freezer storage cabinet. If the base is overloaded with warm food products, a certain amount of time is required to remove heat from items before operating temperatures can be maintained. The system is designed for storage of refrigerated or frozen product.

Frequently opening the doors or drawers will increase the temperature in the cabinet and will require a certain amount of time to recover.

### **To Shutdown for an Extended Period of Time**

If the units are not to be used for an extended period of time, disconnect the electrical power supply and open the doors (or drawers) to the storage cabinet. As soon as the cabinet has warmed to room temperature, wipe out the base interior.

## **MAINTENANCE PROCEDURES**

### **CLEANING**

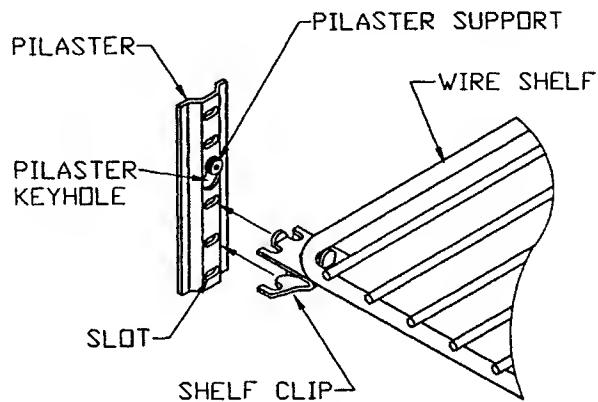
**WARNING: DISCONNECT ELECTRICAL POWER SUPPLY BEFORE CLEANING ANY PARTS ON THE UNIT.**

### **STORAGE CABINET**

Use warm, soapy water to clean storage cabinet and doors. NEVER USE cleaners containing grit, abrasive materials, bleach or harsh chemicals. Rinse thoroughly and

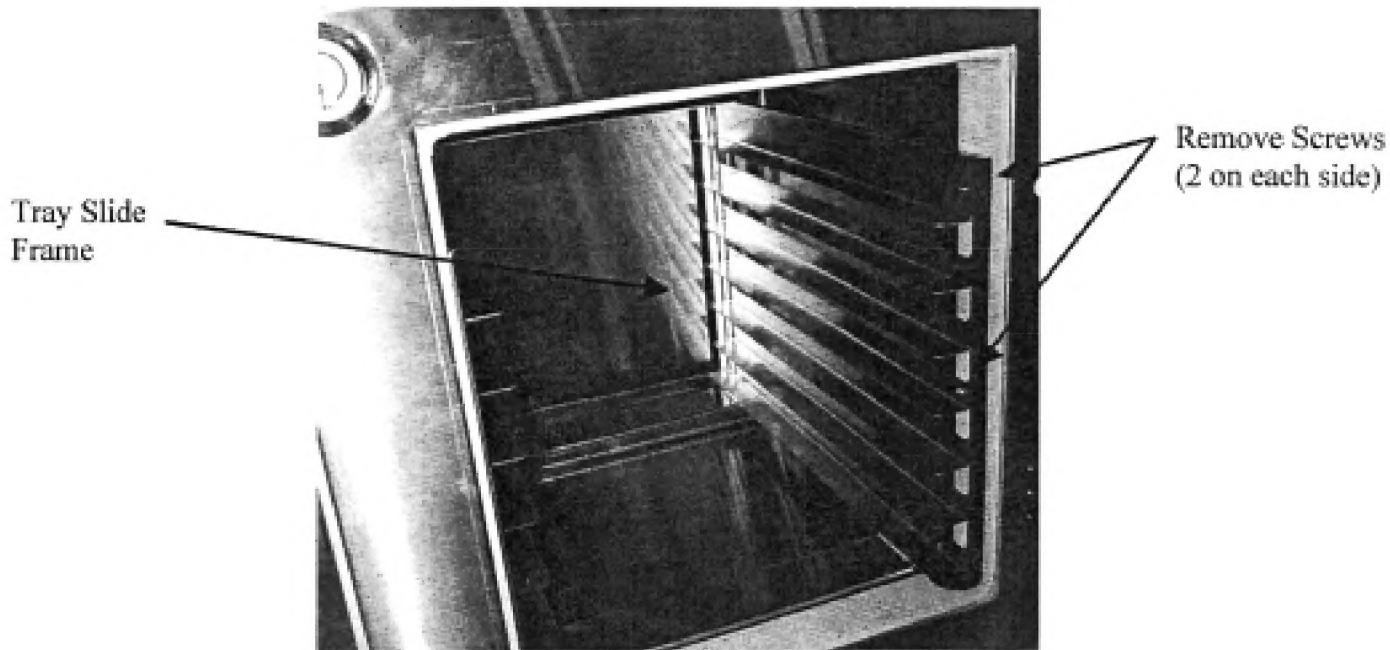
dry with a clean soft cloth. Always rub in the same direction as the grain pattern on the stainless steel.

To clean the inside of the storage cabinet, remove wire shelves, tray slides, or drawer mod. If equipped with shelves (KRUC/KRWT only), all wire shelves are adjustable and can be easily removed. Clean shelves in a sink. If shelf clips have been removed, make sure the four clips per shelf are at same height in pilaster. The shelf clips have a small projection on top which holds the shelf in position and prevents it from slipping forwards. The clip must be "snapped" in place by squeezing clip together and inserting into slot in pilaster keyhole. (See Fig. 8).



**Fig. 8**

If equipped with tray slides (KRUC/KRWT only), the tray slides can be removed, using a philips head screwdriver, by removing the screws securing the tray slide assembly to the breaker strips, then pulling the frame assembly out. (See Fig. 9).

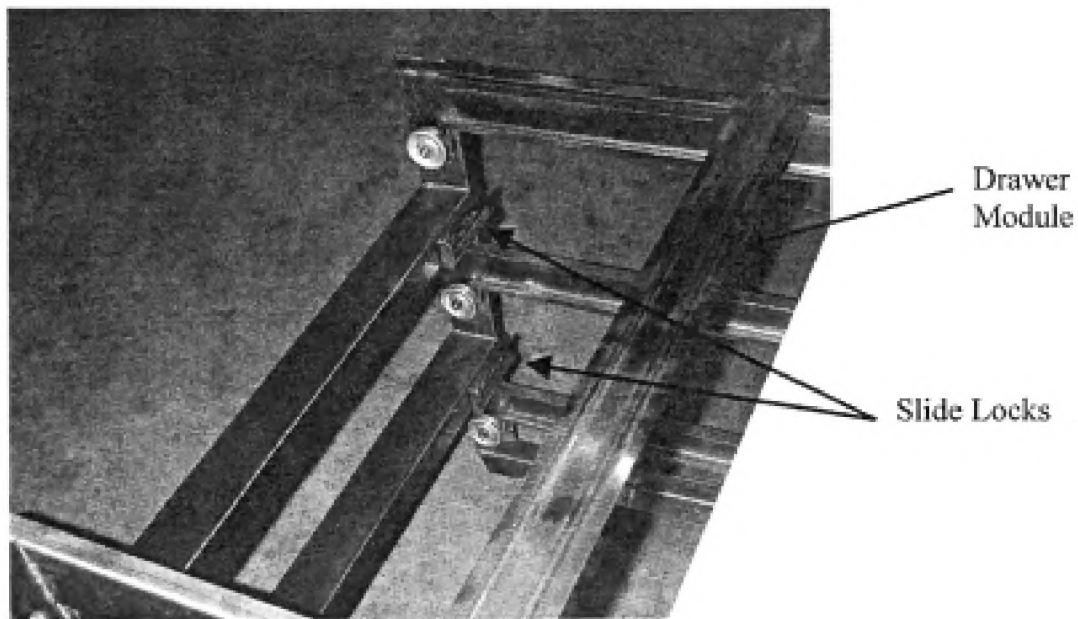


**Fig. 9**

If equipped with drawers, remove all drawers. The drawer frame can be removed by lifting up on the slide locks, then pulling slide locks to the center of the drawer frame. The entire frame assembly is now free to slide out of cabinet. (See Figs. 10 & 11).



**Fig. 10**



**Fig. 11**

### **Condensing Unit**

**WARNING: DISCONNECT ELECTRICAL POWER SUPPLY BEFORE CLEANING ANY PARTS ON THE UNIT.**

The condensing unit coil and/or filter must be cleaned regularly on self-contained models for optimal performance. The operating environment will affect the required frequency of cleaning. However, coils should be cleaned a minimum of once every three months. Air must be able to freely circulate through the condenser. Unit performance and operating efficiency are significantly affected by the amount of air passing through the condenser. Condenser fins that are clogged with dirt and debris greatly reduce required airflow. **Failure to keep clean may cause premature compressor failure, which will not be covered by warranty.** (On models that contain filters, operating unit without filter will void warranty).

**KRUC/KRWT Units 27-36 inches in length:** The condensing unit is located in the back of the unit, behind the removable, slotted access panel. The condensing unit coil must be cleaned regularly. Remove the access panel using a phillips head screwdriver. Carefully clean dirt and lint from the condenser coil using a vacuum cleaner or soft brush; do not use a wire brush. These units do not have a removable filter. Replace slotted access panel. Reconnect electrical supply.

**KRUC/KRWT Units 37-120 Inches in Length and all KRES self-contained units:** The condensing unit is located behind the louvered panel in the compressor compartment. Remove access panel located in the back of unit. A phillips head screwdriver is required to remove access panel. Carefully clean dirt and lint from the condenser coil using a vacuum cleaner or soft brush; do not use a wire brush.

The filter is located behind the louvered panel, below the condensing unit in the compressor compartment. Remove louvered panel by lifting up and pulling out entire panel. Remove filter by carefully sliding out of tracks. Carefully clean with vacuum or rinse with hot water exercising care not to bend or damage filter frame. Replace filter by carefully sliding it into the tracks. Replace louvered panel by installing top of panel into track and pushing in the bottom so that the locking clips fit inside the opening. Replace rear access panel. Reconnect electrical supply.

Replacement filters are available through the Kairak Warranty Department at 310-539-1443.

**Evaporator Coils**

**WARNING: DISCONNECT ELECTRICAL POWER SUPPLY BEFORE CLEANING ANY PARTS ON THE UNIT.**

Evaporator coils should be cleaned every six (6) months for optimal performance.

The evaporator coils are located in the storage cabinet behind the coil can cover. With a phillips head screwdriver, remove four screws and take off cover. Clean evaporator coils with a vacuum cleaner or soft brush, do not use a wire brush. Replace coil can cover. Reconnect electrical supply.

## **TROUBLESHOOTING**

<b>SYMPTOM</b>	<b>POSSIBLE CAUSE</b>
Compressor fails to operate.	<ul style="list-style-type: none"><li>• Power failure.</li><li>• Plug loose in receptacle or unplugged.</li><li>• Blown fuse or tripped circuit breaker.</li><li>• Main power switch is Off.</li><li>• Temperature controls or time clock not set properly.</li></ul>
Compressor operates for prolonged periods and/or continuously.	<ul style="list-style-type: none"><li>• Door gaskets not sealing properly.</li><li>• Condensing unit filter is dirty.</li><li>• Evaporator coil is iced up or dirty.</li><li>• Prolonged and/or frequent door openings or door(s) ajar.</li><li>• Excessive load of warm food placed into lower storage cabinet.</li></ul>
Lower storage cabinet not holding temperature.	<ul style="list-style-type: none"><li>• Temperature control and/or time clock not set properly.</li><li>• Door gaskets not sealing.</li><li>• Inadequate air circulation due to product loading.</li><li>• Evaporator coil iced up or dirty.</li></ul>

## **SERVICE**

For additional information, contact Kairak Warranty and Service Department at 310-539-1443.